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EDITORIAL

In June, 1909, when the College of Agriculture first opened its doors for instruction, an enterprise unheard of and hence never before tried in the history of Philippine educational work was launched. This very newness attracted a number of bright, enterprising young men to take up the course, and it did not take them long to find out that they had every reason to be thankful for their choice. For in the College of Agriculture and its products, the graduates, we have two very potent factors which are now beginning to make themselves felt in the economic, social and political development of the Philippines.

No other college of the University of the Philippines can point with more pride to a record of any greater achievement than that attained by the College of Agriculture. Starting in almost complete obscurity, "hidden and almost forgotten under the skirts of Mount Maquiling" (as one of the Manila dailies once casually observed) and very often working under discouragingly embarrassing conditions, especially for want of sufficient financial and moral support, the College has gradually worked its way toward recognition. The very great importance of the College of Agriculture in connection with different phases of the country's activities is now becoming generally and widely recognized; and we are now beginning to reap some of the benefits of our persistance in following the far-sighted policy of those who founded it. Assistance and encouragement are had from many different sources. There has come to exist a better understanding between the College and

the people, and they are beginning to be more readily disposed to send their sons to study in this institution. Recently when, in their great anxiety to serve their country and the cause of Democracy, practically every one in the College, faculty and students, offered his services to the National Guard, the public, through the press, was practically unanimous in its expression of fear lest the College be completely disorganized, showing that it felt it needed it. The Legislature, likewise, has for some time been exhibiting symptoms favorable to the College of Agriculture by the very encouraging assistance many of its most prominent members have been lending it. This assistance, needless to say, has taken the form of a more hearty support by the giving of a bigger allotment of funds to meet the pressing needs of the institution.

The graduates of this college now number over one hundred; and with the exception of a few who are taking more advanced technical training in the United States, almost all of these alumni are distributed in different parts of the Islands, acquainting their people with saner and more practicable agricultural practice, either as teachers of agriculture, agricultural inspectors, deputy provincial governors, or as independent farmers. As the vast bulk of the population of the Philippines is agricultural, to whatever province our technically trained graduates go, they find enthusiastic followers of the doctrines they preach. It is encouraging to note that, after being shown better and more scientific methods by our graduates, the farmers are beginning to give up their old, unsystematic ways of farming and to adopt the new. Scientific agriculture in the Philippines, spurred on as it must be by those of our graduates who have joined the ranks of workers, has, indeed, an exceptionally bright future.

The College of Agriculture in its Relation to the Alumni

By Charles Fuller Baker*

Alumni of the College of Agriculture are expected to maintain a live interest in their Alma Mater, not only to visit it occasionally and keep fully informed as to its development, but to take an active part in presenting its interests and results to the people at large and to push its upbuilding energetically. On the other hand, the College would be remiss in its duty and would grossly misinterpret its functions if it failed to keep in close touch with its alumni, and did not continue to take a keen interest in their welfare and to assist them in every possible way.

The College of Agriculture has never lost interest in the performance of its "boys" in active life, has always welcomed every opportunity to keep in communication with them, and has never failed to assist them whenever opportunity offered.

Just now, we are preparing a plan whereby the college courses in English can be extended into post-graduate work among all of the alumni. This is urgently needed, as every one will admit, and we desire to meet the need as fully as possible. It will be combined with courses of reading, designed to stimulate and to keep the graduate in agriculture "up-to-date". In this, as well as in various other respects, the college has the clear intention to back up its alumni.

* Acting Dean, College of Agriculture

AN ANNOUNCEMENT

On account of the recent enlistment of the majority of our more advanced students in the Philippine National Guard, we are compelled to postpone the Fourth Annual Exposition of the College of Agriculture, which, as announced in the preceding issue of the Agriculturist, was to have taken place on November thirtieth and December first of the present year. It is hoped that a better Exposition than ever may be given in 1919.

The College of Agriculture Alumni Association

By Bienvenido M. Gonzalez *

The College of Agriculture Alumni Association was organized on Commencement Day of 1914, when about twenty alumni of the College gathered at a banquet table at the Hotel Metropole with former Dean E. B. Copeland as their guest of honor. Very few at the time fully realized what this alumni association meant. It was simply instinctive in them to get together and perpetuate in their memories the good old college days. With the alumni dispersed in different parts of the Archipelago after graduation and with the impossibility of forming a gathering where everybody would be present even once a year, the members realized that something had to be done to keep them in close touch with their Alma Mater. The Alumni Association, therefore, while patterned after most other alumni associations, was original in that a sentiment distinctly peculiar gave rise to it. In the organization banquet nobody imagined what the association was bound to do in the future until Dean Copeland gave the members some pointers as to what might be made their prospective plans. Every Commencement Day thereafter, the Alumni Association met, and it is a pleasure to point out that almost every graduate of the College is a member of it.

The association has prevailed on The Philippine Agriculturist to conduct a column depicting the activities of the alumni; in this way the association has kept the different members in touch with each other. Most of the work of the Alumni Association outside of promoting good fellowship has been to inculcate among its members the ideals for which the College of Agriculture stands. The society cannot count yet on great material achievements. It is still very young and the financial condition of the members has not enabled it to realize wonders.

Socially, the Alumni Association has entertained the alumni of the College and fellow workers, and it has given a farewell banquet to Dean Copeland which practically all the alumni within close communication with Manila attended, as a token of appreciation for his great work for the College. The association was instrumental in placing on the College Administrative Building the bronze tablet reproduced in this number of the Agriculturist as a frontispiece.

While it is too early to anticipate great things from the alumni, it would not be out of place here to make a few suggestions as to what the association or groups of alumni may accomplish for the good of the College. For "It is of course largely by the extent of the support accorded to a university by its own graduates that the world judges of the right of that university to seek the co-operation of others in planning for the future." The greatest and at once the cheapest service the alumni can render the College is to give it their moral support, by their loyalty to the institution and its principles. They should encourage the work of the College and further it as much as possible with their stamp of approval. The alumni are in a way the best judges of their institution, for they are the actual test of the practicability of the lessons it teaches. There will be times when the College will be assailed through misunderstanding; it is then that they should come to its defense. They should give suggestions for improvement and reform, and these suggestions always go with the authoritative stamp of one whose views are no longer biased by his actual connection with the College. The alum-

* President of the Association.

nus should make an effort, whenever opportunity warrants, to advertise his Alma Mater, for, if he believe in it, he should let the public know of the opportunities open to other men. Most alumni associations of American universities have publications the ultimate aim of which is to promote a better knowledge in their country of their Alma Mater. Alumni clubs are organized among residents in certain localities to further the interests of the university, aside from furnishing congenial gatherings among people with identical ideals and manner of thinking. Social service is often undertaken to show the spirit prevailing in the institution. This kind of help is retroactive, for the better the name of the College, the better the standing of its alumni in the community.

Financially, the support the alumni may render recognizes no limit. As a direct help to the College, buildings may be put up for the welfare of the future alumni—the present students. They could also vote funds for the improvement and perpetuation of beauty spots. They could erect memorials, which would instill encouragement in the present workers. For the good of the students, they could institute scholarships for poor but deserving students, establish loan-funds for needy ones, to be repaid after graduation, and give prizes to promote scholarship and investigation in special lines.

By way of suggestion to future graduating classes, I will give a list of a few things the College would be glad to have:

1. A bell that may be heard all over the campus.
2. A sun dial where everybody may get the correct time.
3. A flagpole.
4. Stone benches at beauty spots.
5. A monument to José Rizal to serve as an inspiration to scholarship and patriotism to coming students.
6. Musical instruments.
7. A band stand.
8. Money to be loaned to needy students.
9. Prizes for scholarship and athletics.
10. Prizes for the best theses.

IN MEMORIAM

EUSEBIO TOLOZA

of the Department of Agronomy
College of Agriculture

Died at Mexico, Pampanga, November 12, 1918.

Concerted Action by the Alumni

By Nemesio Blanco Mendiola*

Like the government colleges in the United States, the College of Agriculture of the University of the Philippines is an exponent of the spirit of the nation, and trains its students to a sense of social service and responsibility. When a graduate leaves this institution and its environs to face the grim realities of his after-college life, he at once becomes aware of two serious problems in the agriculture of his country,—one pertains to what he can accomplish for himself; the other, to what he can achieve for his nation.

Obviously, national service can be effectively and successfully rendered only through the closest unity and harmony within the alumni body. The alumni know this and have already shown proof of this knowledge by electing Professor Gonzalez to the Board of Regents of the University. This triumph shows that the graduates of the College of Agriculture as a body can adopt a college policy and work successfully for it. This program should include not only the administration but also all other vital phases of the life of our institution. As I write this page, I recall vaguely a meeting of the resident alumni which was held several years ago and in which our now acting dean presented to them a very simple plan regarding a permanent agricultural policy for the Alumni Association. "A complete and symmetrical development of the agricultural college along the lines of the world's best ideals for institutions of this kind as adopted to tropical work; the official adoption of a definite program of development and the assurance of adequate support for carrying it out; the closest possible co-operation with other institutions of the Philippine Government in which personal ambitions, jealousies and spites are not to be allowed and the largest possible opportunities for the finishing of agricultural graduates abroad in the best institutions and laboratories of any country"—these were some of his suggestions. This policy has indeed remained permanent, for there is need of it now as there was when Professor Baker addressed the alumni.

Scattered, as we are, in widely separated parts of the Philippines, it may require all kinds of sacrifice on our part to attain the great ends. But physical or geographical barriers are not as effective means of isolation as indifference or personal antagonisms or misunderstandings, and since we are fortunately free from these undesirable conditions, it is to be hoped that despite the disadvantage which our locations have given rise to, we will preserve our unity of action.

The efforts for political triumphs in the University alone are, however, a poor manifestation of the alumni's consciousness of public responsibility and civic duty. The activities of the alumni should be far broader in scope. Agricultural welfare depends upon so many phases of a country's development that its boundaries are beyond even our coast lines.

* Instructor in Agronomy, College of Agriculture.

A Brief Survey of the Work of the Graduates of the College of Agriculture in the Bureau of Agriculture

By José G. Sanvictores*

One of the important things that has to be done soon is to perfect the coordination of all the branches of the Government having any relation, be it direct or indirect, with the agricultural development of the country. From the time they enter the primary schools, where our future farmers should receive their first lessons in practical farming, those of our young men who will take up farming as their life work should be given systematic training, with the end in view of becoming equipped with an adequate stock of that practical experience, which, for obvious reasons, they must have before entering upon their collegiate work. As a matter of necessity, however, under present conditions the college itself must supplement its course with a large amount of practical work, in view of the fact that the young men entering the college who have had practical experience in farming work are indeed very few and far between. Unlike the agricultural colleges in the United States, our College of Agriculture can not expect to draw upon the farming population for students to take up a scientific course in agriculture. It is only by so formulating the curricula of our public schools and of the College of Agriculture that the public schools will be the practical farm schools, and the college the institution for more scientific and advanced studies in agriculture, that we can hope to turn out men properly equipped to be of value to the extensive agricultural propaganda the Government is carrying on. It is by pursuing this policy that we can expect to find men fresh from college able to take up the management of commercial plantations. And it is only in this way that college graduates can satisfactorily fill the rôle of pioneers in progressive farming.

A hurried review of the personnel employed by both the Department of Agriculture and Natural Resources and the Bureau of Agriculture shows that there are in all 21 Los Baños graduates in charge of provinces as agricultural inspectors. As may readily be inferred, their principal duties consist in preaching the teachings of modern agriculture to the farmers, and setting practical examples before them, through the demonstration and other stations. Obviously, the men who will succeed best in this kind of work will be those that combine practical experience with theoretical knowledge. The number of men engaged in technical investigation is comparatively much smaller; and as it is our aim and hope to have an increasingly greater number of college graduates find employment as farm managers for private concerns, the need for more practical men becomes quite apparent. This does not mean, however, that the more scientific courses, strictly speaking, should be omitted; all that is hoped for is that the amount of practical work now being given may be increased, if possible. It would seem that the logical branch of the Government to which to look for improvement in this respect would be the public schools.

As regards the College of Agriculture and the Bureau of Agriculture, the harmonizing of their activities is well assured by the mere fact that right now the majority of the technical staff of the Bureau handling the purely agricultural feature of its work are men educated in the College of Agriculture at Los Baños, as may be seen by the table given elsewhere in this article.

* Assistant Director of Agriculture, Manila.

Where there is so close a contact between two such institutions as the Bureau and the College, through men whose ideals and ideas were formed, or at least influenced, by the teachings of one of them, the same spirit that characterizes the one is bound to be manifested in the performance of their work in the other. By the same token, such men will be influenced to a considerable extent by the policies of the other; hence an interchange of ideas will follow and a final meeting of these ideas on a ground of common understanding.

The following table shows in detail how graduates of the College of Agriculture now in the employ of the Department of Agriculture and Natural Resources and of the Bureau of Agriculture are distributed:

Branch of Service	*College of Agriculture Graduates*
DEPARTMENT OF AGRICULTURE AND NATURAL RESOURCES FOOD PRODUCTION CAMPAIGN (ACT 2723)	
Publicity	1
Demonstration and Extension Div. General Agric. Inspection	
Provincial Agric. Inspectors	11
BUREAU OF AGRICULTURE	
Demonstration and Extension Division	
General Agricultural Inspection	10
Plant Industry Division	
Agronomy (rice and corn)	2
Horticulture	3
Plant Inspection	3
Fiber Division	
Fiber Inspection	3
Fiber Investigation	3
Animal Husbandry	
Animal Breeding	3

As stated in one of the foregoing paragraphs, the great majority of these men are engaged as agricultural inspectors, who are in fact the technical advisers of the provincial and municipal officials in all matters pertaining to the agricultural development of the provinces. Consequently, upon them rests, not only the responsibility of outlining the agricultural program of their respective provinces, but also that of carrying it out. The position is potentially of the greatest importance, and it would be well, in time, for the College of Agriculture, and possibly for the higher grades of the public schools where agriculture is taught as well, to provide specialized courses of study to fit men for this particular line of service. The work is of such a nature that it may well be chosen as the life work of any one. The agricultural development of a province is a very slow process, hence the need for a carefully laid out program that must be followed systematically. Indications point, furthermore, to the increasing importance of the positions of agricultural inspectors and more proper appreciation on the part of the farmers of the work of these officials is becoming evident. There is no reason why an agricultural inspector should not be viewed in the same light that an engineer or a district health officer is now considered. Agricultural development is certainly as important as public works or any other public undertaking, and the men who can contribute even a stone for the upbuilding of this monument have glory awaiting them.

The Agricultural Graduates in their Relation to the General Farming Public

By Inocencio Elayda*

Agricultural college graduates have before them important duties to perform, especially in the way of helping small farmers who form the bulk of the agricultural population. The general agricultural advancement of the country should not be expected unless improvement of methods practiced by the farmers is first effected.

When the agricultural graduates are called upon for advice by the farmers, they must take certain precautions. They should previously study the situation with great care and should try to see far ahead. Few kinds of agricultural work to be done in a locality can be planned from an office desk. It is a problem which should be studied in the field before any satisfactory solution can be attempted. With such data as are furnished by field investigation, and the procedure so adjusted as to meet existing conditions, agricultural work can be conducted with greater assurance for success.

In carrying out an enterprise, the agricultural graduate may be confronted with difficulties, such as lack of facilities; but these difficulties should not furnish cause for discouragement. The graduates should not assume an indifferent attitude, letting things shift for themselves. They should do their best to overcome obstacles or find means that will lead to the solution of present problems.

Equipped as they are before graduation, the graduates are better qualified than otherwise to face life's struggles. When the work to be done, for example, is the introduction of new methods of farming, it is to be anticipated that the innovations are bound to meet all kinds of obstacles. Opposition, objections and criticisms may be viciously directed against the reformers. They may at times be mocked at. It is then that optimism counts for a great deal. Oftentimes such criticisms arise from ignorance or misunderstandings. In any case, such difficulties are too small and too insignificant to deter action on such an important work as agricultural advancement. They will, in time, under proper treatment, surely give way to sound judgment. The graduates, therefore, instead of giving up, should uphold their side once they find out, after careful consideration of the factors, that the stand they take is the right one. It is the persistent effort in the right direction that makes possible the suppression of superstition, the change of long-rooted customs and the successful introduction of new methods, in connection with modern farming.

In this connection, it would not be amiss to say a word or two for the information of the general farming public. The agricultural graduates, by choosing the agricultural profession for their life work, show that they have at heart the cause of the farmers in general. They are anxious to help in the agricultural development of the country, and particularly in advancing the present condition of the small farmers. They are ready to serve in any capacity tending to promote agriculture. But, as in any other profession, they have their shortcomings; and a few are mentioned here, not with any idea in viewof lodging complaints, but for the sake of making points clear. The College of Agriculture, from which most of our technical agriculturists are graduated, is a very young institution. The number of our graduates is very small in comparison

*Assistant Secretary, Fourth Agricultural Congress of the Philippines.

with the amount of work which demands their services. In fact, many technical positions in agriculture, in the government service, remain unfilled on account of this shortage. Consequently, with the exception of those who go to private farming, all our graduates, old as well as recent, have been taken into the government work. There are, besides, some who are employed in large farms, and others who are abroad taking advanced courses in agriculture.

For success in handling a farm, or in undertaking such an enterprise as farming, three factors are absolutely essential, namely: (1) knowledge, (2) executive ability, and (3) business ability. When private enterprise takes in a recent graduate and turns over to him the management of a farm, the landowner is running a risk because of lack of experience on the part of the new manager. A young graduate can intelligently plan the work and to some extent carry it out, as he possesses the necessary knowledge of fundamental facts and such practical training as he acquired in college. In a word, he is in possession of the first factor; but he does not possess in the same degree as an experienced graduate the necessary executive ability properly to carry out the work nor sufficient judgment and ability to handle financial transactions in which are involved the economical purchase of materials and equipment and the profitable disposal of farm products. This experience is acquired through actual practice which a graduate can get quicker and more thoroughly than a layman, even without outside help. This is also true of a government project. A recent graduate sent out to carry a project into effect without the guidance of an experienced man or without giving him the time and chance to work it out by himself, is likely to make blunders, and with all his good faith and intentions, he is liable to cause disappointments. In either case, the new graduate is placed in an embarrassing position. Especially is this true, when we consider that the agriculture of our country has not as yet been thoroughly and comprehensively studied. There are few exact data for him to use and all he can do is to work out his own local problems before he can proceed to any real constructive work. It is in these matters that our graduates, especially the new ones, are bound at first to produce inferior results. On that ground, should they be blamed if they make blunders? Let the government or private agricultural concerns take our recent graduates; but before leaving them alone and before passing judgment on them, give them first the necessary guidance from men of executive and business ability, or at least give them the time and the chance to try, until they have solved the problems by themselves, or until they have acquired the necessary training in the school of experience, under competent hands.

The situation as a whole is very promising. The agricultural graduates are beginning to gain due recognition on the part of the general farming public. Their efforts are proving a material aid to agricultural development. The Agricultural Congress has approved several measures tending to improve our agricultural institutions, increase the number of agricultural graduates and send more of them abroad for advanced training in technical agriculture.

With such help and encouragement coming from many sources, the agricultural graduates will, we hope, in time, be in a better position to work for the development of Philippine agriculture. When the success of their efforts shall have been realized, then these technical agricultural graduates may look back and recall with gratitude their many friends who have lent them support during the trying days in the earlier periods of their careers. In the meantime, they can only ask for the public's patience and that great results be not expected of our graduates too soon.

The Philippine Agricultural Graduate as an Independent Farmer

By José Zamora*

After finishing his college work, the agricultural graduate must prove to the people the value of the title that has been conferred on him, and in order to accomplish this, as an independent farmer, he must possess the following qualities: He must be studious, a constant and active worker, and he must also possess a little capital. This conclusion is based upon six long years of experience in farming, experience that I began to obtain immediately after graduation.

It seems that the reason why many people have not quickly recognized success among our graduates is because of lack of one or the other of the above qualifications. They have often not been able to go into independent work, it being especially true that most graduates lack capital. On the other hand, the urgent demands of the Government have drawn many of them into Government employment, and once in the service, individual credit for their work is commonly lost. The practical farmer must be studious, must always be studying his own results and conditions, and comparing his own results with those of his neighbors. Actual first hand investigation of all this must be made, since, in many cases, what the ordinary farmer says of his results contains but little truth. Frequently, after one hears a very wise discussion by a man supposed to be a farmer, upon visiting his farm, it is common to find that he is only a land owner and farms merely by proxy through his tenants. I have heard many people in Manila, possessing extensive tracts of lands in the provinces, say, "I have so much land and I have harvested so much because I ordered my people to do this or that," and these very owners may not visit their farms once a year, except possibly at harvest time, and may not know the kind of soils they have, or what kind of work their tenants do to obtain these results, and, therefore, statements from men of this class commonly have very slight practical value.

To be an independent farmer, one must necessarily have money to carry farming to the point of effective operation, otherwise, instead of being an independent farmer, he will inevitably become a dependent farmer and be a victim of the money lenders, with the probability of eventually losing all that he possesses. To build up a successful farm, beginning with nothing, requires many years of hard work, just as it does to attain success from such a beginning in any other business. To be a successful farmer, one must be immune to disappointment and discouragement. The beginning farmer has probably a great deal of data from friends and may have read many books referring to the work in which he proposes to engage, and in most cases he will be convinced that the work he is going into is a very promising business, since, on paper, his estimates look attractive. Indeed, he has even figured out just how much money he will make the first year, etc. However, as soon as the first plow begins to cut into the ground, he will begin to discover that he has overlooked many practical matters, that he has insect and fungous diseases to combat, and many very serious problems to solve, and that it is commonly a far cry from prospectuses to practical results.

Farming is perhaps the greatest game of chance of any known business. The farmer has to overcome great numbers

* Farmer, Silang, Cavite.

of obstacles and difficulties, to combat many enemies, and to solve a great number of local problems. Naturally, if the farmer does not exert himself to the utmost and bring to all of this the greatest possible amount of activity of mind and body, he cannot succeed in farming. Activity is especially necessary; plowing must be done at exactly the right time, and seeds must be planted under the most favorable circumstances to obtain the best results. A common cause of failures among farmers is to be attributed to not doing things at the right time. Procrastination is an impossible proposition in farming.

One of the recompenses in farming is that the farmer is his own master. The entire responsibilities in connection with the operation of his farm rest on his own shoulders, clearly and solely. He must meet his own difficulties, solve his own problems and act according to his own best judgment. There is no chance for him to attribute failure to the imperfect orders of the chief above him, or to some subordinate below him. To the right kind of a man this is all a great stimulus.

In the Philippines, as a whole, and especially in central Luzon, it is probable that scarcely more than ten per cent of actual land owners are also actual farmers. The remainder work indirectly through various types of tenantry and really act as no more than money lenders and small-scale bankers. Very commonly, the returns which such men demand for their money have no relation to the real profits of farming. If we consider all the work done from the beginning of plowing to harvesting, we will find that there is rarely as much as from twenty to thirty pesos net gain per hectare, if we continue with the old "casama" system, and pay no attention to proper culture and fertilization. In a large proportion of cases, results are far poorer than this. I have personally seen many farmers in Bulacan lose their crops for two consecutive years, just because they insisted on planting a late variety of rice in fields without an irrigation system. Many people continue to expect results due to some fortunate chance, from exhausted soils, and continue to plant such soils year after year without fertilization. I would refer here to a case the results of which astonished a whole barrio. A certain farmer cropped a piece of land for many consecutive years, finally, of course, with very poor results. In 1911, he became very disgusted over the fact that much of his land would not yield as much rice as had been used for seed. He came to me and asked what should be done to obtain something from the land. Knowing the general cause of his failure, I asked him if he was ready to follow all of the instructions that I would give him and buy those things that I would recommend as necessary. He promised to follow directions and the next morning was busy plowing his seed bed. The rice field had a good irrigation system. The seed bed was placed on the highest part of the field and plowed three times. After plowing, the water was allowed to stand on it one day, after which it was thoroughly harrowed, and thirty kilos of tankage was applied to the seed bed of 10 × 15 meters. The next day, the seed was broadcasted on the mud. The seedlings were ready to be transplanted in about twelve days, when they were 30 centimeters high. Three months after this, the palay was as high as the farmer's shoulder and when harvesting came, he had a good crop and was able to pay off a part of his debts. It was worth while to mention that on his entire area, this man practically doubled the ordinary amount of work, and applied some fertilizers. This result surprised and interested the

whole barrio, and from that time on I was always called upon to help solve their various farm problems. Also, from that time these people began to use fertilizers and give far better care to the preparation of their seed beds and rice fields. It seems to me that this is one of the very special duties of the agricultural graduates toward the people of the country—to give them clear, sane and very practical advice whenever such advice is needed. Advice must be given with the greatest care, since, if good results do not follow, the adviser and the college he comes from are both discredited. On the other hand, the people have the very deepest appreciation of advice that results in bettering their crops and in bettering the conditions which surround them.

At present, while almost all nations are engaged in war, and while a vast number of the farms in the belligerent European countries are deserted, or at least production is greatly decreased, and while the prices of food products of every description, everywhere, have greatly increased, it is also our business to give attention to the lesser food products of every description. This is particularly a time when the Islands greatly need the help of all their agricultural graduates to impress upon our farmers the great value of all the lessre food crops. By "lesser food crops" I mean, of course, those crops which can only be grown on a large scale near large markets, or where there are special facilities for handling and preserving them. I know numbers of industrious small farmers who have considerably increased their income by planting vegetables. At my place, there is an Ilocano family, composed of four men, a woman and four children, all of whom work together. This family produces from its small farm over ₱1,200 a year, an income which is not at all usual for a small farmer. This particular family has been able to provide for itself much better than the average family can do; as for instance, in the buying of additional work animals and a female carabao to supply milk for the family. The crops planted by this family are eggplants (500 plants in 500 square meters), two plots of radishes of 500 square meters each, a tomato plantation of 2,000 square meters and a hectare and a half of upland rice. Another man planted radishes in a plot of 1,000 square meters and three months after harvested a crop valued at ₱60.00. In front of my laborer's camp, I set out fifty eggplants. These produced enough fruits to supply fifteen laborers, and I have already sold ₱15.00 worth outside the place. They are still fruiting. From all of these facts we can easily see that there is good money in horticulture in the Philippines and more attention must be given to it under the direction of trained men We will thus greatly help ourselves, our people and our Government.

One thing is certain: that active and practical agricultural development in the Philippines calls urgently and pointedly for a very large contingent of the strongest and most able type of Filipino youth.

The Technical Agriculturist as a Government Official in the Department of Mindanao and Sulu—His Mission and Opportunities

By Mariano E. Gutierrez*

When the Filipino technical agriculturist comes to Mindanao, he has a big task to accomplish. He must work for the unification and amalgamation of Philippine races—a work which will tend to make the Filipino people greater as a nation. Although alone, his work in this respect should not be belittled, for he is among the few officials who come more in contact with the people or whose influence can be felt by the farming class, which is the most stable of all the classes.

The traditional antagonism of the Christian and Mohammedan Filipinos was fostered by members of the former who were exiled to Mindanao by the Spanish government because they were undesirable citizens in the North. These undesirables were converted into soldiers and, under the command of Spanish officers, were used to subjugate the Moros. Thanks to the most far-sighted policy of immigration inaugurated by the present head of the Department, the influx into Mindanao of the better class of northern people is bound to produce incalculable benefits.

The agricultural deputy, by always practicing a square-deal policy with the people among whom he is working and by showing an example of good citizenship, will help to bring about a condition of mutual understanding. His work is as varied as there are different lines of agricultural pursuits in his particular province. He may be exploring new hacienda sites, conducting an experiment of this or that crop in different regions of the province, studying the potential possibilities of the province for an agricultural map, establishing a nursery or helping in the establishment of one, teaching farmers seed selection, distributing seeds and seedlings and at the same time giving instructions for planting them, helping in the establishment of home gardens, investigating the work of managers in behalf of absentee landlords, visiting and instructing Moros in rancherias, and so on.

Mindanao is a country of magnificent distances. Add to this the fact that many places can only be reached on land by means of trails which are as variable as the weather. Transportation facilities are decidedly poor. The agricultural deputy has to cover his province mostly on foot, by vintas (bancas) or launches, and on horses if there be any obtainable. As he does not stop very long in one place, he continually faces all the inconveniences of a roving life: tired muscles, rain, bleaching heat, late or no meals, falls from horses, little sleep, and what not.

This official has to deal with several government branches, besides the people. To succeed well in dealing with the human element, tact and prudence must always be exercised. These are especially needed with the Moro people, who are very sensitive. To use the same treatment and to expect the same response from them as from Ilocano and Tagalog farmers would spell failure. Remembering this and the fact that he should educate the Moros so that they will speedily come up to a standard comparable to other peoples of the northern islands is a work that may well require the best in any man.

Mindanao is the virgin field on which many capitalists, American, Filipino, and foreigners, have set their eyes for

*Deputy Provincial Governor, Cotabato, Department of Mindanao and Sulu.

present and future exploitations. By the nature of his position, the agricultural deputy has many chances to meet these people, in fact more so than his colleagues working in the northern provinces. Several of these deputies have already received fair offers for private positions. If his service in the government be efficient he will be sure to attract attention.

The deputy might, by rigid economy, have saved enough money after serving the government for several years to then secure a piece of choice public land and launch on an independent business enterprise.

In the public service, if he has shown real agricultural executive ability, he will probably be asked to enter into agreement with the Government for a definite period at an increased rate of compensation. In this case he must always bear in mind the following advice of Governor Carpenter, who has the agricultural progress of his Department foremost in his heart:

> Do not make the mistake of considering a small employment or partnership proposition in private enterprise, abandoning the magnificent opportunities you have for a Government career to be followed by far greater rewards in private agricultural enterprise subsequently when you will have made a real reputation for yourself and at the same time a record that will be a monument of patriotic service.

IN MEMORIAM

BALDOMERO T. VELASQUEZ

AGRICULTURAL INSPECTOR AND
DEPUTY PROVINCIAL GOVERNOR
BUREAU OF NON-CHRISTIAN TRIBES

DIED AT BAYOMBONG, NUEVA VIZCAYA, NOVEMBER 11, 1918

A Postgraduate Reading Course for Alumni of the College of Agriculture

By Charles F. Baker[1] and Emma S. Yule[2]

A highly important part of the education of any man consists in the reading of good books. For Filipinos, whose education is being attempted in the English language, the importance of reading good books in that language is highly accentuated. Weakness in English is one of the commonest defects of Filipino students, and, frequently, they have made no real progress toward correction of this defect, even up to the time of graduation from college. It is perhaps more difficult for them to accomplish this in the College of Agriculture than elsewhere. The curriculum of the College of Agriculture is crowded with technical subjects and, outside of actual class and laboratory hours, the time of the student is wholly taken up by practical agricultural work, leaving only the evenings, after a full day's hard work, for regular study, with no vacant time in which general reading might be done.

This matter can not but be of the highest possible importance to all our alumni. An official communication, or a business letter, written in poor English, with all sorts of grammatical errors, and wrong use of words, is quite enough to impair, if not destroy, the reputation and standing of the writer. As an actual matter of fact, it is practically impossible for most of our graduates to write anything in English that is fit for publication, their contributions almost always requiring extensive editing. This is a matter demanding the constant and most active attention of every alumnus, and former students as well. The reading of good books, rightly done, will not only go far towards the improvement of one's English, but is also highly important for general educational purposes. Alumni are urgently recommended to purchase the following books, which may well form the nucleus of their private libraries. These books may be obtained gradually as needed for reading purposes, and reading should be done with the greatest care as indicated hereinafter by the head of the English Department:

INDUSTRIAL CHEMISTRY

Tilden, Wm. A., Chemical Discovery and Invention in the Twentieth Century (Van Nostrand Co.) ..... ₱7.00

Duncan, R. K., 1. The Chemistry of Commerce
2. The New Knowledge
(Harper & Bros., New York) 4.00

Fritsch, J., The Manufacture of Chemical Manures (Van Nostrand Co.).... 8.00

Findlay, Alexander, The Treasures of Coal Tar (Van Nostrand Co.) 4.00

Roebuck, J. R., The Science and Practice of Photography (Van Nostrand Co.) 4.00

ANIMAL HUSBANDRY

Gay, The Principles and Practice of Judging Live Stock (MacMillan & Co.) 3.00

Gay, The Breeds of Live Stock (MacMillan & Co.) 3.50

Henry and Morrison, Feeds and Feeding, abridged edition (Published by the authors, Madison, Wisc.) 3.50

Mumford, Beef Production (Published by the author, Urbana, Ill.) 3.00

[1] Acting Dean College of Agriculture.
[2] Assistant Professor of English.

Dryden, Poultry Breeding and Management (Orange Judd Co.) 3.20
Mumford, The Breeding of Animals (MacMillan & Co.) 3.00
U. S. Department of Agriculture
1. Diseases of the Horse 2.00
2. Diseases of Cattle 2.00
(Superintendent of Documents, Washington, D. C.)
Pearl, Surface, and Curtis, Diseases of Poultry (MacMillan & Co.) 3.20

RURAL ENGINEERING

Fortier, Samuel, Use of Water in Irrigation (McGraw-Hill Book Co.)
Seaton, Roy A., Concrete Construction for Rural Communities (McGraw-Hill Book Co.)

PLANT PATHOLOGY

Jordan, General Bacteriology (W. B. Saunders Co.) 6.00
Cook, M. T., Diseases of Tropical Plants (MacMillan & Co.) 5.50

ENTOMOLOGY

Herrick, Insects Injurious to the Household (MacMillan Co., New York) 3.50
Ross, R., Mosquito Brigades (Longman, Green & Co., New York) 2.00

GENERAL AGRICULTURE

Yearbooks of the U. S. Department of Agriculture, 1916 and 1917 (Obtainable from the College of Agriculture.)
Van Hall, Cocoa (MacMillan & Co.) 8.00
Copeland, Coconut (MacMillan & Co.) 6.00

GENERAL READING

Vallery-Radot's Louis Pasteur (Doubleday, Page & Co.) 5.00
Stevenson, Treasure Island 1.68
Crawford, F. Marion, Saracinesca
Ransome, Japan in Transition 4.38
Giles, China and the Chinese
Williams, H. S., The Story of Nineteenth Century Science
Muir, Pattison, Heroes of Science: Chemists
Dyer & Martin, Edison, His Life and Inventions
Parsons, W. B., An American Engineer in China
Dana, Two Years Before the Mast 1.63

NOTE:—All orders for books may be placed with the PHILIPPINE EDUCATION Co., 34 Escolta, Manila. Supplementary book lists will be issued by the College of Agriculture from time to time.

DIRECTIONS FOR READING

I. We read: First, to gain information, and to lengthen our thought diameters and thus enlarge our thought circles. Second, to improve expression. Third, for recreation.

II. Essential helps: 1. A good dictionary. Webster's Unabridged or Webster's Collegiate Dictionary are recommended. 2. A large geography or wall maps or an atlas.

III. Reading that is worth doing at all is worth doing with attention

and care. Slovenly reading is an insult to a writer and a reflection on the reader's mental equipment.

IV. When reading to gain information or to broaden your horizon, a dictionary should be within reach and a geography near at hand. A shelf on which are histories, texts on science, etc., is a helpful friend to have conveniently near.

Consult the dictionary for *all* new words or any word the meaning of which is not clearly understood. Pass no geographical name without reference to map, unless you are sure of its location. This is the only way to learn this phase of geography.

Look up names of men, things, etc., as fully as your reference shelf will permit.

This method makes reading slow, but reading for this object is study. To be of value it must be done carefully and slowly. "Labor is the price which the gods set upon everything worth having."

After reading the article or book with use of references, read it again either immediately or after a short time has elapsed and you will note your increased power of comprehension, and possibly find real pleasure in the reading.

One book or article *carefully read* is of more value to you than many skimmed over.

V. Expression is improved by all careful reading, but it is of value to read for a short time every day with this as the special object. Follow a definite plan:

(1) Read for a week, noting paragraph construction. Observe not only the plan of paragraph but the transition phrases, clauses or words. Compare different writers. Compare with your own work, etc.

(2) Read for a week studying sentence structure. Note the length of sentence. Note the length and structure of sentences as used for expressing various kinds of thoughts on different topics. Sentence study is of immeasurable value in improving expression and it is also very interesting.

(3) Read for a week noting the usage of words. This is an excellent means of acquiring and improving a working vocabulary. The English language is rich in synonyms and idioms and elastic in the use of words. Reading authors accepted as "good," and noting their use of words is the best way to become familiar with idioms and words in their accepted usage.

(4) If you prefer, give a month instead of a week in rotation to each special study. The length of time is of no particular importance. The main thing is to follow a plan, not to read in a haphazard manner.

VI. Reading for recreation should be pure pleasure and sometimes amusement.

The pleasure in reading for recreation will increase in direct ratio to the faithfulness with which the suggestions under "reading for information" and for "improvement of expression" have been followed. For often the pleasure found in reading a story, poem, article, etc., depends upon the reader's general knowledge and appreciation of expression.

A goodly share of reading should be for recreation. But there should be careful selection in what is read. One sometimes hears the advice "Read anything, everything, only read." This is an unwise counsel. Read always the best that is attainable, and that which is within understanding, is a better advice.

To the agriculturist there is an analogy between seed selection and reading selection. In time a desire for only the good in reading is produced, as in plants the pure strain is produced. Then trashy reading fails to satisfy. Of the making of books of high quality the sole mission of which is to give pleasure there is no end. So select. But these books are to be only "chewed." Some few are worth "swallowing." Books read for information or to lengthen thought diameters are to be chewed, swallowed, digested and assimilated. This is the advice (paraphrased) of the great Sir Francis Bacon.

A Directory of the Graduates of the College of Agriculture

CLASSES OF 1911-1918

Abadilla, Francisco, B. S. Agr., 1917. Agricultural Assistant, Lumbatan, Lanao, Department of Mindanao and Sulu.

Adriano, Alfredo P., B. Agr., 1917. Merchant, Koishikawa, P. O. Box No. 1, Tokyo, Japan.

Africa, Emilio M., B. Agr., 1918. Agricultural Assistant, San Ramon Penal Farm, Zamboanga, Mindanao.

Albano, Sotero F., B. Agr., 1913. Assistant in Agronomy, College of Agriculture, Los Baños.

Aldaba, Vicente C., B. S. Agr., 1915. Farmer, Lais, Malita, Davao.

Allarey, Vicente F., B. S. Agr., 1912. Provincial Agricultural Inspector, Lucena, Tayabas.

Aragon, Vicente B., B. Agr., 1918. Provincial Agricultural Inspector, Ilagan, Isabela.

Asunción, Silvestre, B. Agr., 1912. Provincial Agricultural Inspector, Carmen, Bohol.

Aurelio, Catalino G., B. S. Agr., 1915. Supervising Teacher, Bureau of Education, Capiz, Capiz.

Bacomo, Pantaleon U., B. Agr., 1916. Agricultural Assistant, Bureau of Agriculture, Puerto Princesa, Palawan.

Bagui, Florencio, B. Agr., 1913. Teacher, Batangas High School, Batangas.

Balangue, Cornelio, B. Agr., 1916. Provincial Agricultural Inspector, Tuguegarao, Cagayan.

Bartolome, Vicente, B. Agr., 1913. Fiber Inspector and Assistant Chief, Fiber Division, Bureau of Agriculture, Manila.

Bautista, Basilio R., B. Agr., 1918. Provincial Agricultural Inspector, Vigan, Ilocos Sur.

Bautista, Pantaleon, B. S. Agr., 1918. Farmer, Malabon, Rizal.

Bayla, Arsenio, B. Agr., 1918. Agricultural Assistant, Bureau of Non-Christian Tribes.

Cagurangan, Alfonso B., B. Agr., 1916. First Lieutenant, Philippine National Guard.

Caliñgasan, Teofilo G., B. Agr., 1917. Deputy Provincial Governor, Malaybalay, Bukidnon, Department of Mindanao and Sulu.

Camus, José S., B. Agr., 1914. Agricultural Inspector, Bureau of Agriculture Manila.

Capistrano, Severo M., B. Agr,. 1915. First Lieutenant, Philippine National Guard.

Cevallos, Felipe O., B. Agr., 1912. Supervising Teacher, Bureau of Education, Guinobatan, Albay.

Clemente, Leopoldo S., B. Agr., 1917. Assistant in Agronomy, Experiment Station, College of Agriculture, Los Baños.

Cocannouer, Joseph A., M. S., 1918. Farmer, Chowchilla, California, U. S. A.

Constantino, Agripino, B. Agr., 1915. Teacher, Rizal Provincial School, Pasig, Rizal.

Constantino, Marcelino, B. Agr., 1916. Agricultural Assistant, Bureau of Agriculture, Tanza, Cavite.

Consunji, Gaudencio, B. Agr., 1915. Farmer, Samal, Bataan.

Crisóstomo, Marcelo, B. S. Agr., 1913. Agricultural Assistant, Bureau of Agriculture, San José, Antique.

Cruz, Florentino F., B. Agr., 1916. Agricultural Assistant, Department Mindanao and Sulu.

Dacanay, José Q., B. S. Agr., 1915. Assistant in Food Campaign, Department of Agriculture and Natural Resources, Manila.

Dawis, Vicente M., B. Agr., 1916. Assistant Superintendent, Coconut

Plantation, Calamba Sugar Estate, Canlubang, Laguna.

Edrozo, León, B. Agr., 1917. Superintendent and Acting Cashier, Filipino Rice Colony No. 2, Bureau of Lands, Abulug, Cagayan.

Elayda, Inocencio, B. S. Agr. (Iowa); M. S., 1916. Assistant Professor of Agronomy, College of Agriculture, Los Baños.

Espino, Rafael B., B. Agr., 1915. U. P. Fellow in Botany, Johns Hopkins University, Baltimore, Md., U. S. A.

Festin, Santiago, B. Agr., 1918. Deputy Provincial Governor, Davao, Department of Mindanao and Sulu.

Flores, Siméon S., B. Agr., 1917. Agricultural Assistant, Dumaguete, Oriental Negros.

Francisco, Gregorio M., B. S. Agr., 1915. Farmer, Santa Rosa, Nueva Ecija.

Galang, Francisco, B. Agr., 1914. Superintendent, Lamao Experiment Station, Bataan.

Ghofulpo, Teodorico G., B. Agr., 1915. Binalbagan, Occ. Negros.

Goco, Arsenio A., B. Agr., 1917. Plant Inspector, Bureau of Agriculture, Manila.

Gonzalez, Bienvenido M., B. Agr., 1913; M. S., 1915 (Wisconsin). Assistant Professor of Animal Husbandry, College of Agriculture, Los Baños, and Member of the Board of Regents, U. P.

Grageda, Gregorio F., B. Agr., 1917. Teacher, Lapak Agricultural School, Siasi, Jolo.

Gutierrez, Mariano E., B. S. Agr., 1917. Deputy Provincial Governor, Cotabato, Department of Mindanao and Sulu.

Harder, Tomás, B. Agr., 1918. Agricultural Assistant, Panitan, Capiz.

Labayen, Segundo D., B. Agr., 1915; M. S., 1917 (Louisiana). Assistant Sugar Chemist, Alto Cedro, Cuba.

Laparan, Amando L., B. Agr., 1914. Agricultural Inspector, Bureau of Agriculture, Santa Cruz, Laguna.

Layosa, Pedro, B. Agr., 1918. Provincial Agricultural Inspector, Cabanatuan, Nueva Ecija.

Ledyard, Edgar M., B. S. Agr., 1913; M. S., 1915 (California). Director, Agricultural Department, U. S. Smelting, Refining and Mining Co., P. O. Box 1785, Salt Lake City, Utah, U. S. A.

Lejano, Antonio, B. Agr., 1913. Bureau of Agriculture, Manila.

Leon, José de, B. Agr., 1916. Nurseryman, Jolo, Department of Mindanao and Sulu.

Lindayag, Gaspar, B. Agr., 1918. Provincial Agricultural Inspector, San Fernando, La Union.

Luistro, Fernando D., B. Agr., 1915. Assistant in Agronomy, Experiment Station, College of Agriculture, Los Baños.

Macasaet, Valentin, B. Agr., 1918. Agricultural Superintendent, Iwahig Penal Colony, Palawan.

Mariano, José G., B. Agr., 1918. Provincial Agricultural Inspector, Iba, Zambales.

Marquez, Francisco D., B. Agr., 1915. Bureau of Agriculture, Manila.

Medalla, Mariano G., B. S. Agr., 1917. Assistant in Citriculture at Los Baños, Laguna, Bureau of Plant Industry, U. S. D. Agr., Washington, D. C.

Mendiola, Nemesio B., B. S. Agr., 1914; M. S., 1916; Ph. D., 1918 (Cornell). Instructor in Agronomy, College of Agriculture, Los Baños.

Mendoza, Leopoldo G., B. S. Agr., 1917. Farmer, Sagnay, Ambos Camarines.

Merino, Gonzalo F., B. Agr., 1914. Chief, Pest Control Section, Bureau of Agriculture, Manila.

Miraflores, José C., B. Agr., 1915. Chemist of the Hacenderos' Association,

North Negros Sugar Co., Manapla, Occ. Negros.

Mirasol, José J., B. S. Agr., 1915; M. S., 1917. U. P. Fellow in Economics, University of Illinois, Urbana, Ill., U. S. A.

Montellano, Pedro L., B. Agr., 1915. Principal, Intermediate-High School, Bureau of Education, Boac, Marinduque

Muñoz, Apolonio R., B. Agr., 1913. Provincial Agricultural Inspector, Sorsogon, Sorsogon.

Navarro, Andrés, B. Agr., 1912; M. D., 1918. Medical Department, Philippine Constabulary.

Ocfemia, Gerardo O., B. Agr., 1915. Assistant in Plant Pathology, Experiment Station, College of Agriculture, Los Baños.

Octubre, Francisco P., B. Agr., 1915. Teacher, San Carlos, Pangasinan.

Otanes, Faustino Q., B. Agr., 1918. Assistant in Botany, College of Agriculture, Los Baños.

Paguirigan, Domingo B., B. S. Agr., 1916. Supervising Agent, Bureau of Internal Revenue, Manila.

Palafox, Gaudencio, B. Agr., 1916. Agricultural Assistant, Dammao, Gamu, Isabela.

Pañganiban, Elias H., B. Agr., 1915. Assistant in Chemistry, College of Agriculture, Los Baños.

Pastorfide, Dionisio, B. Agr., 1917. Agricultural Assistant, Bureau of Agriculture, Dumaguete, Oriental Negros.

Paulican, Cenon R., B. Agr., 1917. In Charge, Provincial Nursery, Pikit, Cotabato.

Paz, Alfonso de la, B. Agr., 1918. Provincial Inspector, Tarlac, Tarlac.

Quisumbing, Eduardo, B. Agr., 1918. Assistant in Plant Physiology, College of Agriculture, Los Baños.

Quisumbing, Francisco A., B. Agr., 1914; M. S., 1918. U. P. Fellow in Chemistry, Columbia University, New York, U. S. A.

Racelis, Antonio P., B. S. F., 1915; M. S., 1917 (Michigan). Instructor in Forest Engineering, School of Forestry, Los Baños.

Reyes, Simon A., B. Agr., 1917. Plant Inspector, Bureau of Agriculture, Zamboanga.

Romero, León M., B. Agr., 1918. Provincial Agricultural Inspector, San Carlos, Pangasinan.

Roxas, Manuel L., B. S. Agr., 1911; M. S., 1913; Ph. D., 1916 (Wisconsin). Assistant Professor of Chemistry and Secretary, College of Agriculture, Los Baños.

Sablan, Eladio, B. Agr., 1914. Scientific Assistant, Fiber Division, Bureau of Agriculture, Manila.

Samonte Claro, B. Agr., 1918. Provincial Agricultural Inspector, Catbalogan, Samar.

San Miguel, Lucio A., B. Agr., 1916. Deceased.

Santos, Francisco B., B. Agr., 1918. Agricultural Inspector, Laoag, Ilocos Norte.

Santos, Gregorio C., B. Agr., 1918. Agricultural Assistant, Lamao Experiment Station, Bataan.

Sarao, Felix B., B. S. Agr., 1917. Agricultural Assistant, Zamboanga.

Sarmiento Roman O., B. Agr., 1915. Agricultural Assistant, Cotabato, Department of Mindanao and Sulu.

Silayan, Hilarion S., B. S. Agr., 1917. Deputy Provincial Governor, Camp Keithley, Lanao, Department of Mindanao and Sulu.

Tempongko, Clodoaldo, B. Agr., 1911. Deceased.

Teodoro, Anastasio L., B. Agr., 1918. Assistant to Prof. E. B. Copeland, Chico, California, U. S. A.

Teodoro, Nicanor G., B. Agr., 1915. In Charge, Fiber Investigation Section, Bureau of Agriculture, Manila.

Tirona, José P., B. Agr., 1914. Student, College of Medicine and Surgery, Manila.

Trinidad, José M., B. S. Agr., 1918. Second Lieutenant, Philippine National Guard.

Tuason, Dionisio R., B. Agr., 1917. Assistant Agricultural Inspector, La Carlota, Occ. Negros.

Uichanco, Leopoldo B., B. S. Agr., 1915; M. S., 1918. Instructor in Entomology, College of Agriculture, Los Baños.

Velez, Blas C., B. Agr., 1915. Assistant Manager, Hacienda Timaraw, San José, Mindoro.

Vibar, Toribio, B. Agr., 1912. Instructor in Agronomy and Assistant to the Registrar, College of Agriculture, Los Baños.

Vicencio, Arsenio S., B. Agr., 1915. Agricultural Inspector, Bureau of Agriculture, Mexico, Pampanga.

Villamil, Aniceto, B. S. F., 1915.

Villegas, Valente E., B. Agr., 1913. Instructor in Agronomy, College of Agriculture, Los Baños.

Villyar, Paul A., B. Agr., 1917. Agricultural Assistant, Bureau of Agriculture, Batangas, Batangas.

Vista, Tomás I., B. Agr., 1915. Assistant in Agronomy, College of Agriculture, Los Baños.

Zamora, José, B. Agr., 1911, and Master Farmer, 1917. Farmer, Silang, Cavite.

Zulaybar, Eutiquio Q., B. Agr., 1914. Assistant Fiber Inspector, Bureau of Agriculture, Calbayog, Samar.

Facts about the College*

ESTABLISHED JUNE, 1909

Number of students: 1909—55; 1910—95; 1911—175; 1912—253; 1913—294; 1914—380; 1915—428; 1916—450; 1917—164; 1918—364 (due to new entrance requirements).

Students have come from 40 provinces.
Total number of alumni—102.
Number of members of the faculty—32.
Present value of entire plant—(?) ₱225,000.
Annual support to 1917—about ₱148,000.
Average annual cost of operation per student to 1917—₱265.
Annual cost per student following the great reduction of number of students in 1918—₱428.
Tuition—free.
Number of students partly or entirely self-supporting—95.
Student living expense per month—₱15 to ₱25.
Area of grounds—127 hectares.
Number of permanent buildings—11

Number of animals { work carabao—2; dairy carabao—6; carabao calves—4; work bullocks—29

Number of hogs—48.
Number of poultry—160.
Average number of paid laborers employed in farm work—40.
Area in culture—60 hectares.
Number of plants in permanent plantings of coconuts, abaca, coffee, fruits, etc.—about 35,000.
Number of cultures in constant progress, including seed selection, fertilizer tests, etc.—about 4,500.
Number of plants, plant cuttings and seed samples distributed through students and otherwise, 1909-1918—about 950,000.
Number of pages in publication of original studies and investigations by students, 1909-1918—1,800.
Number of pages in publication of original studies and investigations by faculty, 1909-1918, about 4,000.

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* Not including the newly established Experiment Station.

The College of Agriculture and the Philippine National Guard

A STORY IN TELEGRAMS

TELEGRAMS TO THE PRESS

Los Baños, Laguna, P. I.,
October 10, 1918.

One hundred and eighty-six out of three hundred students have offered themselves to the National Guard.

C. F. Baker.

Los Baños, Laguna, P. I.,
10 October, 1918.

From the College of Agriculture faculty of 30 male members, the Dean and 25 others have volunteered their services to the National Guard. Fifteen of that number have actually enlisted. The only two women of the faculty have volunteered for any services they can render.

Charles S. Banks.

TO GENERAL JONES

Los Baños, Laguna, I. F.,
Octubre 10, 1918.

General Jones,
Guardia Nacional, I. F.,
Manila.

Decano y profesores Colegio Agricultura, Los Baños, merecen toda clase de elogios por entusiasta y decidida cooperación causa Guardia Nacional. Después discursos pronunciados por todos ellos se han alistado y jurado ciento noventa y tres estudiantes. De treinta y dos profesores del Colegio alistaronse veinte y siete, incluso las dos señoras del claustro. Se está procediendo reconocimiento físico por el Doctor Villacorta. Sirva facilitar prensa nota de este acontecimiento.

Juan Cailles
Gobernador Provincial.

(Translation)

Dean and professors, College of Agriculture, Los Baños, deserve every eulogy for enthusiastic and determined coöperation to the cause of the National Guard. After speeches made by them all, one hundred ninety-three students have enlisted and taken oath. Of the thirty-two professors of the College, twenty-seven enlisted, including the two ladies of the Staff. Physical examination being carried on by Doctor Villacorta. Please furnish press notice of this event.

Juan Cailles
Provincial Governor.

Los Baños, Laguna, P. I.,
October 10, 1918.

General Jones,
National Guard,
Manila.

We urgently appeal for formation of a full company built entirely from the large body of men now offering themselves from the College of Agriculture.

Baker.

FROM SENATE PRESIDENT QUEZON

Manila, October 10, 1918.

Dean,
College of Agriculture,
Laguna.

Congratulate you and your college upon this splendid showing of devotion to Country.

Quezon.

FROM GENERAL JONES

MANILA, October 10, 1918.

DR. BANKS,
LOS BAÑOS, LAGUNA.

Will order your one hundred men in within a few days.

JONES,
Adjutant General.

MANILA, October 11, 1918.

DEAN BAKER,
COLLEG OF AGRICULTURE,
LAGUNA.

Congratulation on college spirit and thanks for telegrams. Hope to tell you something definite re disposition of men soon.

JONES,
Adjutant General.

MANILA, October 11, 1918.

DEAN,
COLLEGE OF AGRICULTURE,
LOS BAÑOS.

You are to be congratulated upon your efforts. We thank you very much.

JONES,
Adjutant General.

TO PRESIDENT VILLAMOR

An excerpt from a letter of the Acting Dean, College of Agriculture, to the President, University of the Philippines, under date of October 11, 1918.

"Under the remarkably effective leadership of Governor Cailles, we have just passed through an unequalled demonstration of patriotic fervor in connection with recruiting for service under the National Guard. Practically the entire college body, faculty, as well as students, desire to assist in any way possible to them at this critical juncture in the history of these Islands, to redeem the honor of the Filipino people in connection with the pledge which they have voluntarily made. Practically all able-bodied men of the faculty and the student body have offered themselves for enlistment.

HONOR ROLL

COLLEGE OF AGRICULTURE

Members of Faculty and Students who responded to the call of their Country on October 10, 1918, for service in connection with the World War.

FACULTY AND EMPLOYEES

Charles F. Baker, M. A.
Acting Dean
Charles S. Banks, M. S.
Professor of Entomology
Harold Cuzner, B. S. F.
Professor of Agricultural Engineering
Fred W. Ashton, M. S.
Associate Professor of Chemistry
Forman T. McLean, Ph. D.
Associate Professor of Plant Physiology
Otto A. Reinking, M. S.
Associate Professor of Plant Pathology
Inocencio Elayda, M. S.
Assistant Professor of Agronomy
Bienvenido M. Gonzalez, M. S.
Assistant Professor of Animal Husbandry
Manuel L. Roxas, Ph. D.
Assistant Professor of Chemistry
Sam F. Trelease, Ph. D.
Assistant Professor of Plant Physiology
Leopoldo B. Uichanco, M. S.
Instructor in Entomology
Francisco O. Santos, A. B.
Instructor in Mathematics
Valente Villegas, B. Agr.
Instructor in Agronomy
Nemesio B. Mendiola, Ph. D.
Instructor in Agronomy
Nemesio Catalan
Assistant in Agronomy
Fernando D. Luistro, B. Agr.
Assistant in Agronomy
Ramon V. Manio
Assistant in Agronomy
Gerardo O. Ocfemia, B. Agr.
Assistant in Plant Pathology
Faustino Q. Otanes, B. Agr.
Assistant in Botany
Eduardo Quisumbing, B. Agr.
Assistant in Botany
Elias H. Pañganiban, B. Agr.
Assistant in Chemistry
Primitivo C. Ramos, G. Pharm.
Assistant in Chemistry
Tomas I. Vista, B. Agr.
Assistant in Agronomy
Mariano Medalla, B. S. Agr.
Assistant in Citriculture (U. S. D. Agr.)
Isaias Maclang
Teacher in Carpentry
Albino Vidal
Teacher in Blacksmithing
Elias Manalang
Property Officer
Alfredo V. Yñiguez
Chief Clerk

STUDENTS

Abad, Manuel
Abesamis, Ambrosio
Abrajano, Quirico
Acuña, Eulogio M.
Adriano, Bernando J.
Adriano, Felipe T.
Africa, Angel A.
Alas, Benedicto
Alcaraz, Felix A.
Aldaba, Salvador
Aldaba, Victor
Alfonso, Julian
Allas, Teófilo P.
Aquino, Dionisio
Aquino, Severino
Asuncion, Rodolfo R.
Bagalawis, Bienvenido
Bagui, Crispulo
Balanay, Isidoro
Basa, Aproniano
Baybay, Domingo S.
Bucoy, Alejandro
Buenaventura, Agapito
Canonizado, Maximo P.

STUDENTS—*Continued.*

Capinpin, José M.
Carandang, Atanacio
Caray, Elias
Careos, Benito
Cayabyab, Anastacio
Cazeñas, Gregorio D.
Cendaña, Silverio M.
Chan, Gregorio S.
Chanco, Antonio
Clara, Feliciano M.
Clarete, Pio
Collado, Esteban G.
Collado, Isidoro R.
Collado, Tomás G.
Concepcion, Ceferino
Corcino, Baltazar
Corpus, Cecilio
Corrales, José
Cruz, Catalino de la
Cuitiong, Rufino
Dadufalza, Tomás
Dario, Leoncio F.
Derecho, Antonio A.
Desembrana, Basilio
Divinagracia, Delfin
Domingo, Felix
Domino, Silverio
Elayda, Aniano
Erese, Valentin
Esplana, Mauro
Estalilla, Hilarion
Fello, Agapito
Feria, Demetrio
Feria, Policarpo
Ferrer, Tomás
Festin, Simplicio
Fronda, Francisco M.
Frias, Tomás
Gamboa, Fermin
Gonzales, Joaquin J.
Goseco, Andres
Habaluyas, Ramon K.
Hernandez, Basilio
Hernandez, Nemesio
Hidalgo, Vicente
Ilano, Pablo
Imatong, Severino
Isidro, Rufino
Jamias, Julio M.
Jimenez, Enrique
Jugo, Rafael
Katigbak, Gregorio B.
Lago, Francisco P.
Leaño, Benedicto
Leuterio, José
Lichauco, José F.
Limbo, Anastasio M.
Lizaso, Juan
Lumibao, Patricio
Lontok, Ambrosio
Lontok, Gregorio
Lontok, Mariano
Maceda, Felix N.
Magsino, Juan
Malolos, Delfin
Manalo, Gil
Manio, Melecio M.
Manza, Artemio
Mañgonon, Alejandro
Mariano, Severo
Marilao, Venerando
Mendoza, Francisco
Mercado, Toribio
Mojica, Emiliano
Montemayor, Zosimo
Morada, Julian
Nacion, Cipriano
Neric, Juan
Nilo, Fausto
Novero, Teófilo
Opiana, Gil
Padlan, Policarpo, A.
Paglinawan, Sergio
Pagsoliñgan, Juan
Palo, Macario
Padilla, Bonifacio
Paulino, Pedro L.
Pascasio, Juan F.
Pedregosa, Santiago
Peña, Daniel
Peralta, Fernando de
Perez, Florentino
Planta, Ramon
Ponce, Basilio

STUDENTS—*Continued.*

Pronto, Juan R.
Pugeda, Melqueades
Pulgar, German
Punzalan, Edilberto
Punzalan, Mariano
Purisima, Emilio
Rallanca, Lorenzo
Ramat, Ciriaco
Ramos, Florentino
Rayos, Catalino
Rayrao, Timoteo
Red, Francisco
Reforzado, Feliciano
Reveche, Feliciano
Reyes, Antonio
Reyes, Gaudencio M.
Reyes, Marciano
Reyna, Laureano
Rigor, Tomás
Rocafort, Antonio
Rodrigo, Pedro
Rodriguez, Agustin
Rodriguez, Juan G.
Rojales, Pedro
Roldan, Emiliano
Romera, Francisco
Roque, Damaso
Roque, Olimpio
Royeca, Simeon
Rowan, Anastasio
Sabado, Raymundo
Sabaduquia, Tomás
Sanchez, Antonio
Santamaria, Emilio
Serrano, Felicisimo
Sison, Pedro
Sulit, Victor
Taleon, Alejo
Tenebro, Magno
Tirona, Mariano
Togade, Roman
Torres, Eladio
Torres, Juan
Unite, Juan
Valera, Pastor
Vargas, Segismundo
Vega, Celedonio de la
Ventura, Apolonio
Ventura, Tranquilino
Vera, Feliciano de
Verzosa, Gregorio
Viado, Basilio
Villadolid, Deogracias
Villanueva, Brigido
Villanueva, Leon B.
Villaraza, Mariano
Yango, Clemente
Yap, German
Zamuco, Calixto
Zaratan, Gualberto.

COLLEGE AND ALUMNI NOTES

One hundred ten of the students who enlisted in the Philippine National Guard early in October were ordered to proceed to the training camp on the twenty-third of that month.

Although the National Guard has deprived the College of Agriculture of a large percentage of its students, especially among the seniors, our work as an institution is still going on.

Recent newspaper reports received in this office announce the marriage of Mr. Domingo B. Paguirigan, '16, to Miss Felisa Rosales, of Lilio, Laguna. The happy bridegroom is now employed by the Bureau of Internal Revenue as supervising agent in Manila.

Of the students who enlisted in the National Guard, news have been received of the following promotions: Deogracias Villadolid, regimental sergeant-major; German Yap, first sergeant; Alejandro Bucoy, sergeant; Felix N. Maceda, sergeant; Valentin Erese, sergeant; Francisco Red, color sergeant; Rafael Jugo, supply sergeant; José Corrales, mess sergeant; and Melecio M. Manio and Clemente Yango, regimental clerks of the infantry corps. Ramon K. Habaluyas has been assigned to the signal corps.

Among the employees, graduates and former students of the College who joined the National Guard in the earlier part of the year, the following have recently been commissioned: Dr. José S. Villacorta, '14 (College of Medicine and Surgery), who was college physician, first lieutenant, medical corps; Messrs. Alfonso B. Cagurangan, '16, Severo M. Capistrano, '15, Emilio B. Macasaet and Serapio Palafox, first lieutenants; and José M. Trinidad, '18, and José M. Mendoza, second lieutenants, infantry corps.

Dr. Villacorta is now seriously ill in the hospital in Manila, as a result of an attack of influenza.

Associate Professor Fred W. Ashton, of the Department of Chemistry of this college, has been detailed to the United States Army for war work in connection with the making of charcoal from coconut shells.

News has been received of the death of Baldomero T. Velasquez, a former student of this institution. The deceased was in the service of the Mountain Province at the time of his death.

Although influenza is quite severe in Los Baños and in the barrios adjoining the College, the epidemic has so far claimed only two victims at the College of Agriculture.

A small herd of Indian dairy buffaloes has been acquired by the College for the experiment station. At the same time there were received an Indo-Chinese buffalo bull for the work-carabao breeding herd and a small herd of Indian cattle.

Weather Observations, September, 1918

OBSERVER—V. RAVARA

Sept.	Rainfall in mm. Daily	Rainfall in mm. Weekly	Temperature in oC Max.	Temperature in oC Min.	Temperature in oC Mean Daily	Temperature in oC Mean Weekly	Wind in Miles Daily	Wind in Miles Weekly	Cloudiness	Atmometer Reading in c. c. Evaporation Daily	Atmometer Reading in c. c. Evaporation Weekly	Atmometer Reading in c. c. Insolation Daily	Atmometer Reading in c. c. Insolation Weekly
1	0.2		29.0	22.9	25.9		15.0		Fair	15.4		17.4	
2	0.8		29.8	22.9	26.3		34.9		½ cloudy	19.0		15.4	
3	8.7		25.6	23.9	24.7		25.1		Cloudy	4.5		2.2	
4	20.3		25.8	23.7	24.7		28.0		Shower	3.6		3.3	
5	101.0		26.0	22.8	24.4		26.1		"	1.3		0.4	
6	23.1		29.0	23.0	26.0		74.7		Cloudy	15.2		10.2	
7	0.1	154.2	30.0	23.0	26.5	25.5	61.8	265.6	Clear	27.6	86.6	18.3	67.2
8	5.5		28.6	23.8	26.2		81.0		¾ cloudy	20.2		13.7	
9	1.0		29.7	24.3	27.0		87.8		½ "	28.8		14.8	
10	1.5		30.2	24.4	27.3		67.8		½ "	24.4		15.9	
11	7.3		27.3	23.8	25.5		38.6		Cloudy	10.0		7.1	
12	1.0		27.0	24.6	25.8		64.8		"	22.2		14.0	
13	0.5		29.0	23.8	26.4		32.7		Clear	18.2		12.7	
14	0.0	16.8	30.5	23.1	26.8	26.4	26.9	399.6	½ cloudy	19.2	143.0	10.5	88.7
15	2.3		28.4	22.9	25.6		62.0		Partly cloudy	16.9		13.7	
16	0.4		28.5	23.5	26.0		27.0		Cloudy	18.3		22.1	
17	7.5		27.6	22.8	25.2		17.8		½ "	11.6		9.8	
18	4.7		27.5	23.6	25.5		22.5		¾ "	12.6		13.2	
19	4.8		28.9	22.8	25.8		32.6		¾ "	12.6		10.6	
20	0.7		29.0	23.2	26.1		28.5		Clear	12.3		19.0	
21	19.1	39.5	29.0	23.8	26.4	25.8	15.4	205.8	½ cloudy	18.3	102.6	14.9	103.3
22	0.2		29.4	23.4	26.4		47.1		Clear	19.3		15.2	
23	15.1		29.0	23.4	26.2		39.3		½ cloudy	18.3		10.8	
24	1.4		29.5	23.8	26.6		38.2		½ cloudy	11.3		9.2	
25	12.0		28.6	24.3	26.4		24.3		"	12.4		12.3	
26	3.7		27.8	23.6	25.7		22.9		"	7.7		7.5	
27	0.2		29.5	24.4	26.9		29.9		Clear	19.8		13.0	
28	0.0	32.6	30.0	23.8	26.9	26.4	40.9	242.6	"	22.7	111.5	15.0	83.0
29	T		26.0	23.1	24.5		34.1		½ "	17.7		11.0	
30	15.8		28.8	23.5	26.1		31.1	65.2	¾ "	14.6		1.8	
Month		258.9				26.0		1178.8			476.0		355.0

September	Rainfall in mm. Weekly	Max.	Min.	Weekly
	COLLEGE COFFEE PLANTATION			
1–7	270.7	27.8	20.3	24.0
8–14	45.8	27.5	21.8	24.6
15–21	——	30.2	20.5	25.3
22–28	40.5	30.8	20.5	——
	SUMMIT OF MOUNT MAQUILING			
1–7	23.5	20.8	18.7	19.8
8–14	48.7	21.1	19.6	20.4
15–21	29	21.8	18.4	20.1
22–28	34.3	22.2	19.3	20.7

The month was drier and sunnier than usual during the wet season, but rainfall was abundant. The combination of conditions was favorable for growing crops.

FORMAN T. MCLEAN
Associate Professor of Plant Physiology.

UNIVERSITY OF THE PHILIPPINES

COLLEGE OF AGRICULTURE

LOS BAÑOS

The College of Agriculture is in its ninth year with a student body of nearly 360. It occupies a tract of about one hundred and twenty-seven hectares on which every important crop in the Philippines is under cultivation. It has a large series of varieties of leading crops and very numerous introduced plants under tests and observation. The number of distinct cultures, not including series of fertilizer experiments, is more than two thousand. The college has twelve concrete buildings and two of mixed materials.

The courses are:

A six-year course based on the completion of two years of the public high school course, and leading to the degree of Bachelor of Agriculture.

A four-year course based on the completion of the public high school course, and leading to the degree of Bachelor of Science in Agriculture.

Graduate work leading to the degree of Master of Science is given to persons holding the degree of Bachelor of Science.

Tuition for non-residents of the Philippines is ₱150.00 a year.

The college year began June 10, 1918.

For further information address the Dean of the College.